



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D3564-13
Job Sheet 182131



Part No: D3564-13

Job Qty: 6 ea

Part Name: Wearpad Fwd



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/17/18

Job Tracking No:

Due Date: 8/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV E IPP Rev:A New Issue 07-03-08 ec IPP Rev:B As per Rev C 07-07-09 JLM IPP Rev:C As per Rev D 07-09-09 JLM Verified By:EC IPP Rev:D Comments revised on Step 5, 6 per B44657 09-02-04 KJ Verified By:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea	8/31/18	8/31/18	0.00	0.00	Start Up Waterjet		21 18/08/21
100	Waterjet	6 pcs	8/31/18	8/31/18	0.00	0.46	Waterjet1		21 18/08/21
120	QC	6 pcs	8/31/18	8/31/18	0.00	0.00	QC8		AUG 22 2018 38
130	Brake NC	6 pcs	8/31/18	8/31/18	0.36	0.14	Brake NC 1		21 18/08/21
140	QC	6 pcs	8/31/18	8/31/18	0.00	0.00	QC5		SEP 10 2018 68
150	SprayPaint	6 pcs	8/31/18	8/31/18	0.00	0.03	Spray Paint		21 18/08/21
160	QC	6 pcs	8/31/18	8/31/18	0.00	0.00	QC5		SEP 10 2018 68
170	Packaging	6 pcs	8/31/18	8/31/18	0.00	0.00	Packaging3-1		21 18/08/21
180	QC21-SA	6 Ea	8/31/18	8/31/18	0.00	0.00	QC21		21 18/08/21

Backward 138946

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304S16GA	304/316 Sheet .063	1.3320 sf (.222 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M304S16GA	1	65	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Wearshoe	7.000inches ± 0.030	7.030 6.970		
2	Wearshoe	2.285inches ± 0.010	2.295 2.275		
3	Wearshoe	3.080inches ± 0.010	3.090 3.070		
4	Wearshoe	3.500inches ± 0.010	3.510 3.490		
5	Wearshoe	0.300inches ± 0.010	0.310 0.290		

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																										
Date : _____	Part: D3564-13 Job No: 182131 Serial No/Batch: S104115 Container No: S104115				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Description Dart Aerospace Ltd. 1270 Aberdeen Street Haverhill, MA 01830 Tel: 978 613 632-6200 Email: sales@dartaero.com www.dartaerospace.com																																																												
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left;">Root Cause</th> </tr> <tr> <td style="width:15%;">Environment</td> <td style="width:15%;">☐</td> <td style="width:35%;">No Re-verification</td> <td style="width:35%;">☐</td> </tr> <tr> <td>Design</td> <td>☐</td> <td>Operator</td> <td>☐</td> </tr> <tr> <td>Doc/Data</td> <td>☐</td> <td>Offset/Setup</td> <td>☐</td> </tr> <tr> <td>Equip/Tooling</td> <td>☐</td> <td>Supplier</td> <td>☐</td> </tr> <tr> <td>Handling/Pre</td> <td>☐</td> <td>Training</td> <td>☐</td> </tr> <tr> <td>Material</td> <td>☐</td> <td>Use for Testing</td> <td>☐</td> </tr> <tr> <td>Internal Transport</td> <td>☐</td> <td>Poor Information</td> <td>☐</td> </tr> <tr> <td>Tribal Knowledge</td> <td>☐</td> <td>Rushing</td> <td>☐</td> </tr> <tr> <td>LOA</td> <td>☐</td> <td>Product Improvement</td> <td>☐</td> </tr> <tr> <td>Substation</td> <td>☐</td> <td>Process Improvement</td> <td>☐</td> </tr> <tr> <td>Past Expiry Date</td> <td>☐</td> <td>Manufacturing Process</td> <td>☐</td> </tr> <tr> <td>Misidentified</td> <td>☐</td> <td>Past Due</td> <td>☐</td> </tr> <tr> <td colspan="4" style="text-align: left;">OTHER : _____</td> </tr> </table>					Root Cause				Environment	☐	No Re-verification	☐	Design	☐	Operator	☐	Doc/Data	☐	Offset/Setup	☐	Equip/Tooling	☐	Supplier	☐	Handling/Pre	☐	Training	☐	Material	☐	Use for Testing	☐	Internal Transport	☐	Poor Information	☐	Tribal Knowledge	☐	Rushing	☐	LOA	☐	Product Improvement	☐	Substation	☐	Process Improvement	☐	Past Expiry Date	☐	Manufacturing Process	☐	Misidentified	☐	Past Due	☐	OTHER : _____			
Root Cause																																																												
Environment	☐	No Re-verification	☐																																																									
Design	☐	Operator	☐																																																									
Doc/Data	☐	Offset/Setup	☐																																																									
Equip/Tooling	☐	Supplier	☐																																																									
Handling/Pre	☐	Training	☐																																																									
Material	☐	Use for Testing	☐																																																									
Internal Transport	☐	Poor Information	☐																																																									
Tribal Knowledge	☐	Rushing	☐																																																									
LOA	☐	Product Improvement	☐																																																									
Substation	☐	Process Improvement	☐																																																									
Past Expiry Date	☐	Manufacturing Process	☐																																																									
Misidentified	☐	Past Due	☐																																																									
OTHER : _____																																																												

6	Wearshoe	0.300inches $\pm$ 0.010	0.310 0.290
7	Wearshoe	0.188inches $\begin{matrix} + 0.005 \\ - 0.001 \end{matrix}$	0.193 0.187
8	Wearshoe	7.750inches $\pm$ 0.030	7.780 7.720
9	Wearshoe	0.062inches $\pm$ 0.010	0.072 0.052

Plex 8/17/18 1:49 PM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																		
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																			
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																			
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																			
Large Fab ☐	Composite ☐	Supplier ☐																																																																				
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																		
Description Work Order Deviation		Disposition		Completed By																																																																		
				Lead hand / Supervisor Approval Verification																																																																		
				QC / QA Coordinator Approval																																																																		
Root Cause <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> <td style="border: none;">Pressure/Forced ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> <td style="border: none;">Bending ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> <td style="border: none;">Centre Not Concentric ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;">Cracks ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> <td style="border: none;">Cuffs ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> <td style="border: none;">Crushing ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> <td style="border: none;">Heat Treat ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> <td style="border: none;">Wave/Twist in Tube ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> <td style="border: none;">Marks/Chatter ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> <td></td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> <td></td> </tr> </table>		Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Design ☐	Operator ☐	Bending ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Past Expiry Date ☐	Manufacturing Process ☐		Misidentified ☐	Past Due ☐		FAULT CATEGORY <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Countersink ☐	Off-set ☐	Drawing ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐	Pressure/Forced ☐																																																																				
Design ☐	Operator ☐	Bending ☐																																																																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐																																																																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐																																																																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐																																																																				
Material ☐	Use for Testing ☐	Cuffs ☐																																																																				
Internal Transport ☐	Poor Information ☐	Crushing ☐																																																																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐																																																																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐																																																																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐																																																																				
Past Expiry Date ☐	Manufacturing Process ☐																																																																					
Misidentified ☐	Past Due ☐																																																																					
Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																				
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																				
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																				
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																				
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																				
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																				
Countersink ☐	Off-set ☐	Drawing ☐																																																																				
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																				
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
OTHER : _____																																																																						